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ABSTRACT

Data collection and analysis procedures adapted from the fields of anthropology, developmental psychology, and linguistics have been instrumental in advancing writing process research. Two such models of study are the embedded case study and the researcher as participant observer. The embedded case study research design embeds small group information within information from a large group. Data from informants from each phase of the study provide triangulation information for each of the other phases, thereby providing one measure of validity. The types of findings generated by this particular design are not restricted by the particular phases of the design. That is, the working hypotheses can be drawn from any one phase or more than one of the phases of the study. In the other research model, the researcher becomes involved in classroom planning, instruction, and evaluation to provide data to generate new hypotheses or to corroborate or contradict existing research while describing the learning process. The participant observer model is flexible enough to join classroom teachers, researchers, and learners in various inquiry roles and situations. The involvement of differing perspectives cannot help but make unique contributions to the dynamic and growing knowledge base associated with learning. (HOD)

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WRITING PROCESS RESEARCH METHODOLOGY: RESEARCH DESIGNS, DATA COLLECTION, AND DATA ANALYSIS PROCEDURES

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Since the early twenties, researchers have warned of the danger of fragmentary approaches to research in writing (Graves, 1981). Lyman (1929) wrote that studies "measure pupil products and assume that by doing so they are evaluating the manifold intangible processes of the mind by which those products were attained." Meckel (1963), Parke (1961), and Braddock (1963) called for research that focused more on learners than on teachers and for studies on the process used and developed by writers over long periods of time.

CS 208191

The past ten years have produced just such longitudinal, learner-centered research studies on the writing process. Researchers have begun to draw from many fields in their effort to broaden the contexts of their investigations. Data collection and data analysis procedures adapted from the fields of anthropology, developmental psychology, and linguistics have been instrumental in advancing this new line of writing process research.

In this paper, two widely diverse research designs used in writing process research are presented. In both cases the specific research design, the data collection methodologies, and the data analysis techniques are presented. In addition, the depth and breadth of the findings which can be drawn from such a design, methodology, and analysis are discussed. Although the research studies themselves are divergent in their designs and methodologies, they are, however, unique and valuable models for studies of the process used by writers.

The Embedded Case Study

Research Design

In the first research design, four interlocking phases were conceptualized throughout each aspect of a writing process investigation in two private Kindergarten classrooms (see Figure 1). The first phase of the study concerned the frequency and length of the writing products of the large group of children, thematic choice of the children and the curricular area in which

the writing took place for each of the children's writing efforts. The second phase provided descriptions of the teachers' instructional behaviors during the teaching of writing in the classrooms. Phase three provided descriptions of three children in each of the two classrooms identified and described in the large group data phase. Specifically, descriptions focused upon the children's educational backgrounds and school writing experiences. The final phase of the study provided descriptions of interviews with a child from each of the two classrooms identified and described in the large group data. In this design small group information is embedded within information from a large group; data from informants from each phase provides triangulation information for each of the other phases, thereby providing one measure of validity (Guba & Lincoln, 1981).

(Insert Figure 1 Here)

Data Collection

Data collection was not constrained by the researcher choosing to attend only to specific outputs or variables. Rather, the researcher did not choose to focus upon or manipulate any of the antecedent conditions. Therefore, in each of the phases, data was gathered by use of videotape cameras, collection of writing samples, interviews on cassette tape recorders, and observer notes. One additional form of data collection referred to here as oral note-taking was proven quite effective. During the oral note-taking the researcher would speak softly into the

microphone of a miniature cassette recorder while observing students in the classroom writing or the teacher during writing instruction or writing conferences. The advantage of the oral note-taking system is that it allows the researcher to keep her eyes on the subject while making continuous notes on the tape. This oral note-taking system also was less inhibiting to the teachers and children in the classroom than was the video-tape camera, yet offered data that was nearly as complete as that recorded on video-cassettes.

Data Analysis

Data analysis involved categorization of the descriptive data gathered during the investigation. Specifically, data was coded on researcher-developed protocols with special care taken to use triangulation data from each phase of the study. The use of a multileveled research design was particularly helpful during the data analysis of this study. The coupling of large group writing product data with the small group writing process and individual interview data provided mutual clarification which would otherwise not have been possible.

Discussion

The types of findings that are generated by this particular design are not restricted by the particular phases of the design. That is, the working hypotheses can be drawn from any one phase or more than one of the phases of the study. For example, the influences of the teacher on the writing processes of children

was determined by examining data in all of the phases, whereas the writing processes and developmental differences between children were able to be determined by examining data in two of the phases. In other cases, working hypotheses could be formulated on the basis of only one phase of the study.

The Researcher as a Participant Observer

Design

Inquiry often ignores the context of the classroom when relating findings to educational setting (Graves, 1981). When the context of the classroom is considered, the researcher, teacher, and learner share in the inquiry process. The involvement of classroom participants and researcher changes the role and definition of inquiry. One inquiry approach which considers the context of the classroom is one in which the researcher becomes a participant and observer of the learning process. When the inquiry process involves the researcher, teacher, and learner in the inquiry process implications are offered for teacher educator and the classroom teacher.

A model of research in which the researcher becomes involves in classroom planning, instruction, and evaluation provides data to generate new hypotheses, corraborate or contradict existing research while describing the learning process. In the following description the researcher took on the role of the teacher, planning, instructing and evaluating written language instruction for a period of twelve weeks while collecting data from three

perspectives (see Figure 2).

Perspective 1: Participant Observer Collection. Data collected included extensive record keeping which examined the interactions between the teacher/researcher and the children from the researcher/teacher's perspective. Daily records of instructional strategies, charts of daily conferences, logs of researcher/teacher observations and perceptions, and audio-video recordings were classified and/or duplicated for further examination.

Perspective 2: Observer Data Collection. Data collection involved extensive observation in which interactions between researcher/teacher and children were examined by a classroom teacher. Observation charts, checklists and narratives of observer reactions were categorized for further examination and analysis.

Perspective 3: Learner Data Collection. Data collection involved extensive record collection in which the interactions between the children and researcher/teacher were provided by children responses. Children's work samples, assignment responses, overall achievement, and self evaluation were categorized for further examination and analysis.

(Insert Figure 2 Here)

Data Analysis

Data from each of the phases were analyzed utilizing descriptive statistics and narrative. Descriptive statistics were

provided for frequency and length of written language instruction, types of behavior displayed during instruciton, and children's discussion and self evaluation of the instructional activity. Ability differences, developmental variances, perceptions of written language abilities and teacher's instructional behaviors were compared. Categorization and classification of data was used to support descriptions and comparisons and corraborations of previous research. In analyzing the data in a descriptive manner, the researcher accepted the uniqueness of the classroom setting and attempted to understand events without having interpretations influenced by existing theory (Wilson, 1977). However, the researcher does not ignore previous work, but utilizes past research to explain events and point out similar and dissimilar findings.

Discussion

A research project in which the researcher becomes a participant observer recognizes the importance of contextual understanding. When context is ignored the research of learning becomes suspect. "Perhaps the reason we researchers have neglected the issued of context of learning in research so long, is that we have spent so little time on the sites where experiments have been gathered," (Graves, 1981, p. 114). Participant observation allows the researcher to be aware of the context and consider the context when analyzing the data.

Research conducted in the classroom setting reflects real events, real classrooms (Rich, 1983). The major advantage of the

real life influence is that inquiry can lead to exploration of existing classroom methods and development of new ways of doing things. The researcher who shares the daily classroom life is capable of emphathetic understanding impossible with other researcher methods (Wilson, 1977).

The tools of participant observer research are highly compatible with strategies for observing children and looking for patterns of behavior which help understand how children define the process of learning (Heath, 1983). Understanding children's perceptions of the learning process can bring about metalinguistic awareness that ultimately enhances their school performance (Cazden, 1974).

Rich (1983) states that changes in inquiry are providing teachers with a new look at research, understanding of the learning process, and a valuable professional experience. Modifications of the participant observer model of research can provide classroom teachers access to the inquiry process. When teachers observe and collect data in the classroom in order to explain events and point out similar and dissimilar findings they learn about the research process. This provides a creative type of professional development which encourages understanding of the learning process.

The participant obsever model of research is flexible enough to join classroom teachers, researchers and learners together in various inquiry roles and situation. The involvement of differing perspectives cannot help but make unique contributions to the dynamic and growing knowledge base associated with learning.

Summary

The past ten years have begun to produce longitudinal, learner-centered research studies on the writing process. Although the two research designs and methodologies of the inquiries presented in this paper are widely divergent, they are both designs which can broaden the base of context by describing children, teachers, and the classroom. In this way, researchers, teachers, and the students can begin to share in the inquiry process.

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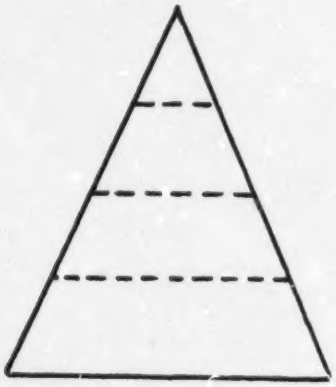
Figure 1

Four general phases of interlocking data in the investigation of children's writing processes and teachers' instructional behaviors



Phase 4: Interviews (N=2)

Phase 3: Writing Process (N=6)

Phase 2: Teacher Instruction (N=2)

Phase 1: Large Group (N=30)

Figure 2

Three perspectives throughout the design and data collection in a shared inquiry process

Data Collection		
Participant Observer (Researcher-Teacher)	Observer Classroom Teacher	Learner
Research Logs	Checklists	Work Samples
Audio Tapes	Observation Charts	Assignments
Records of Activities	Narratives	Self Evaluation
		Reactions
		Reports